



RCA Amateur Radio Club

Indianapolis, IN

ARRL Affiliated Club

www.w9rca.org

JULY 2023

MONTHLY NEWSLETTER

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE TUESDAY, JULY 11th, 6:30 PM AT NORTH SIDE EVENTS, FORMERLY THE KNIGHTS OF COLUMBUS, 2100 EAST 71st, INDIANAPOLIS, IN

RCA ARC NEWS

JUNE MEETING SUMMARY – Thanks to everyone who attended our June meeting. Greg, K0GAH, gave a treasurers' report. We doing well in that area. Dues to the Indiana Repeater Council have been paid. Jim, AF9A reported there were no repeater problems in the last couple of months. The general consensus was the Dayton Hamvention was good. We'll do it again next year! Used equipment prices were high as were prices on new equipment. Field Day is coming up. Our Club is responsible for operation on 6m. We could use some more help. More operators. Dave, N9KZJ reminded us of the upcoming Ships on the Air event. Jim, K9RU reported we're getting an average of six applicants for each license test session.

AMATEUR RADIO LICENSE TEST SESSION

Date: Saturday, July 8, 2023
Time: Starting at Noon **by appointment only.**
Location: Salvation Army EDS Training Facility, 4020 Georgetown Rd
 Indianapolis, IN 46254-2407
Contact: Jim Rinehart Ph:(317) 721-1458 Email: k9ru@arrrl.net
Required: FCC FRN and a completed NCVEC 605 license application form.

Laurel VEC test sessions: <https://www.laurelvec.com/?pg=exams>

Online amateur radio license tests sessions:

ARRL online test sessions: <http://www.arrrl.org/findonlineexam>

<http://www.arrrl.org/arrrl-digital->

Additional online examination dates and teams : <https://hamstudy.org/sessions>

HAMFESTS, OPERATING EVENTS, VOLUNTEER OPPORTUNITIES

Salvation Army Open Net, Thursday, 7PM, W9RCA repeater, 146.88 MHz, tone 88.5 Hz

July 8-9 IARU HF World Championship <http://www.arrrl.org/iaru-hf-world-championship>

July 29 Auburn Hamfest, Auburn Cord Duesenberg Museum, Email: w9ou@arrrl.net

July 29 East Central Indiana Hamfest, Randolph County Fairgrounds,
<https://sites.google.com/view/ecindianahamfest/home>, Email: inhamfest@gmail.com

August 5 Elkhart East Hamfest, Northern Indiana Event Center, Email:
elkharthamfest@gmail.com

August 12 -- Hendricks County Tailgate Fest, Avon United Methodist Church,
 6850 E. US Hwy 36, Avon, <http://hendricksares.org> Contact: Kenneth A Kayler,
 KC9SQD, Phone: 317-874-7068, Email: kc9sqd425@gmail.com

WA7BNM expanded contest calendar, <https://www.contestcalendar.com/contestcal.htm>

INDY UNITED AND RCA ARC FIELD DAY

The Indy United Field Day was a success. W9SU was a 4A operation with 2 HF SSB stations, 2 CW stations, a GOTA station using the W9RCA call and a 6 meter VHF station.

The RCA ARC was responsible for setting up and operating the 6 meter station.

One of our key operators, Dick Davis, W9ZB was not able to make it year as he is recovering from surgery.

We asked both the RCA ARC and the Indianapolis Radio Club for volunteers and had a turn out I had not expected. In the picture are: WB8FAX, Jim Wolford, AF9A, Jim Keeth, Dave Jarvis, N9KZJ, Tom Carrol, W9CSX and Paul Harsin, KD9VMX.



When we set up Friday afternoon, about 4 PM, 6 meters was great with openings across the US, Caribbean and South America. We worked a lot of stations using the W9RCA, W9SU and W9CSX calls and the band was still open after dark. We thought we were in for a killer FD.

Saturday morning our first contact was Cuba, but by 10 AM the band was dead and we only had spotty openings and were not able to complete many the contacts. Jim Rinehart, K9RU and John Garino, KF9UH operated and camped out over night. John put in a lot of hours operating and 6 meter band while conditions were not good. It was almost a work Indiana contest.

Gregg, K9GAH, and his son came down and his son gave us valuable contact on the GOTA station. Gregg made some the aux station at the GOTA station.

Still, we had a great time. Food was great, Cathy Harris, W9QKR, did a great job! And the FD setup was impressive.

Thanks for everyone who took time and stopped by to help with the 6 meter operation. - Jim K9RU

INDY UNITED FIELD DAY CHAIRMAN BRIAN SMITH'S FIELD DAY COMMENTS:

"I want to thank everyone who played a part in FD 2023, no matter how seemingly minor your role.

As for how we did on the scoreboard, it's too soon to give an accurate estimate of QSOs and total points, plus we generally don't tip our hand to our competitors when there are still scores to be tallied and submitted to the ARRL. So you probably won't hear any solid numbers from us until late July, after the deadline for entries has passed.

My general take on the operating side of Field Day is that conditions were disappointing.

That said, I still believe we banged out enough QSOs for a superior score. And when you add in the hundreds of GOTA QSOs – this year worth 5 points for each contact, which is then doubled because of our power class – we could wind up atop our transmitter class and nearly every other.

But as usual, we won't get the official Field Day standings until early November, when the December QST arrives in our mailboxes."

Want to see a video of the Field Day we just experienced? Rufus Hardeman, NE9T, is a man of many talents. Not only does he roll in every year with his Traveling GOTA Road Show, setting up and managing our "Get On The Air" station (with the able assistance of Dan Morel) – he also makes Field Day videos!

His latest edition captures the spirit of Indy United's FD 2023 at Victor Conservation Club – from spider beam to bagpipes – with a special guest appearance by Cathy's kitchen!

As is his tradition, Rufus narrates while giving a walking tour of the Indy United Field Day layout, talking with fellow club members along the way. <https://www.youtube.com/watch?v=VLoJ1FjzDiQ>

He's been making Field Day videos since 2013, and if you missed the previous installments, you're in luck – every one of them can be viewed on his own YouTube channel. Conveniently, Rufus has arranged his entire "10 Years of Field Day" video collection on one page ... just follow this link and enjoy the stroll down Memory Lane:



[https://www.youtube.com/playlist?](https://www.youtube.com/playlist?list=PLbYAombDr5PgkyWGJEPAKxmgNcBE2puq)

[list=PLbYAombDr5PgkyWGJEPAKxmgNcBE2puq](https://www.youtube.com/playlist?list=PLbYAombDr5PgkyWGJEPAKxmgNcBE2puq)

Rufus, N9ET

Rufus has been an integral part of Indy United's success from day one, and if anyone ever fails to appreciate his many contributions to our Field Day effort, I'll put them in charge of collecting next year's GOTA equipment, hauling it in to VCC and setting it up by themselves!

Thanks, Rufus, for all you do. – Brian, W9IND

2023 FIELD DAY WAS A SUCCESS

2023 ARRL Field Day is in the books and from all indications, it was a success!

[Social media](#) is buzzing with stories and photos from around the country.

Results are coming in, and so far (July 5, 3,314 Field Day entries have been received. You can see a live, up-to-the-minute count of the entries, comments, and photos on the Field Day [Entries Received](#) web page.

2023 AMSAT Field Day AMSAT Field Day is over, and early data shows how the satellites were utilized.

It has been many years since there were more than one or two Field Day submissions from outside North America. This year, immediately after of Field Day ended, there were two submissions from Japan.

The satellites worked well. The FM Tevel family of satellites and GreenCube seemed to be popular. SO-50, AO-91, and the International Space Station were also busy with their FM single channel. DOSAAF-85 (RS-44) was quite tame, with plenty of bandwidth for many to make contacts, whether they were sitting on a frequency and calling CQ or using the hunt-and-pounce method.

More data is on the way. For updates, visit the [AMSAT](#) website. A special thanks to Bruce Paige, KK5DO, for the information provided in this story.

HAM RADIO IN GERMANY DRAWS INTERNATIONAL CROWD

The 46th annual International Amateur Radio Exhibition, HAM RADIO, attracted more than 11,000 visitors to Friedrichshafen, Germany, June 23 - 25, 2023.

ARRL, which has nearly 7,000 international members, sends a small delegation to the convention each year -- greeting members and friends from the global amateur radio community, and networking with other national radio societies. ARRL representatives included President Rick Roderick, K5UR and his wife Holly Roderick; CEO David Minster, NA2AA; Director of Operations Bob Naumann, W5OV, and Director of Marketing and Innovation Bob Inderbitzen, NQ1R.

Messe Friedrichshafen Managing Director Klaus Wellmann and Project Manager Petra Rathgeber were delighted with the success of the event.

"HAM RADIO lived up to its reputation as Europe's largest amateur radio exhibition. In cooperation with the German Amateur Radio Club (DARC), the perfect partner for the event, we showed that amateur radio plays an important role in society," said Wellmann and Rathgeber. "This year's slogan, 'We're all about STEM!' was brought to full fruition, with many activities focusing on work with young people -- something that really brought in the crowds."

A recent press release from HAM RADIO said young attendees were able to tinker and make things under guidance, and they were also able to test their knowledge in the Ham Rally, a technical scavenger hunt featuring 25 stations. Students were encouraged to try sending Morse code, and pass the QSL card quiz. ARRL participated in the Ham Rally, challenging young people to name and identify the US states.

"We were really happy with the way this year's exhibition went," said Christian Entsfellner, DL3MBG, Chairman of DARC. A total of 392 participants, including 149 commercial exhibitors and international associations, as well as 243 flea market exhibitors, represented the unique diversity of amateur radio around the world.

Plans are already being made for next year's HAM RADIO to be held June 28 - 30, 2024. More information is available at HAM RADIO. See also ARRL's photo album from the convention on Facebook.

LEGISLATION TO REMOVE PRIVATE LAND USE RESTRICTIONS ON AMATEUR RADIO INTRODUCED IN CONGRESS

Congressmen Bill Johnson (OH-06) and Joe Courtney (CT-02) reintroduced a bill in the US House of Representatives on June 12 -- [H.R.4006 \(see full text of bill in this PDF\)](#) -- to remove private land use restrictions that prohibit, restrict, or impair the ability of Amateur Radio operators from operating and installing reasonable antennas on property that they own or control. Similar legislation, H.R. 9670, was [introduced](#) by Congressman Johnson in 2022.

"I reintroduced the Amateur Radio Emergency Preparedness Act to remove barriers to disaster and emergency communications and training, and to promote education in STEM subjects related to critically needed wireless technology,"

Congressman Johnson said in a release. "Passage of this bill will promote developing and sustaining our nation's wireless future and facilitate and encourage amateur radio operations as a public benefit."

"As their actions during recent natural disasters such as Hurricane Sandy proved, amateur radio operators in Connecticut can be a critical component of disaster response and emergency management. It is in our communities' best interest that we give them the capabilities to operate at the highest level, and with the re-introduction of this bill, we've taken a strong step in that direction," said Congressman Courtney.

The exponential growth of communities bound by private land use restrictions that prohibit both

the operation of Amateur Radio and the installation of amateur station antennas has significantly restricted the growth of the Amateur Radio Service.

[ARRL The National Association for Amateur Radio®](#) continues its multi-year efforts to eliminate private land use restrictions that prevent Amateur Radio operations and has pledged to strongly support Congressman Johnson and Congressman Courtney in their efforts on behalf of Amateur Radio.

Rick Roderick, K5UR, President of ARRL, on behalf its Members and America's Amateur Radio community extended his thanks and appreciation for the leadership of Congressman Johnson and Congressman Courtney in their tireless efforts to support and protect the rights of all Amateur Radio Operators and to further STEM education and the advancement of American expertise in wireless technology.

UPDATE: FCC ULS SYSTEM RESTORED

The FCC Universal Licensing System (ULS) has resumed operations, including the Electronic Batch Filing system (EBF).

As of June 27, 2023, all systems have been reported to be working. However, visitors to the website will see a message referring them to Public Notice DA 23-529 for additional information and guidance on filing deadline extensions.

The systems were first reported unavailable on June 9, 2023. On Friday afternoon, June 23, the EBF system was restored. All VEC organizations use that system for filing exam sessions, individual applications, and club license applications. ARRL VEC staff worked late into Friday night to ensure all backlogged sessions and application files were transmitted to the FCC before the weekend. Approximately 350 backlogged files were successfully submitted to and processed by the FCC before the system's normal shutdown at 8 PM.

ARRL is still monitoring the ULS system, and any further updates will be available at ARRL News.

Previous story from June 22, 2023:

On Wednesday morning, June 21, 2023, the FCC had reopened the Universal Licensing System (ULS) and supporting systems, according to an email distributed to VEC organizations. However, as of 4:00 PM on Wednesday, the Electronic Batch Filing (EBF) system, used by VEC organizations for filing exam sessions, individual applications, and club license applications, was still not available as promised. Unfortunately, this means applications for new and upgraded licenses, and individual and club license filings still cannot be uploaded in the system for issuance.

When the EBF system becomes available, the Commission is requesting VECs to limit submissions into the filing system. In an email sent by the FCC, all EBF filers were asked to adhere to a restricted upload schedule in order to keep the EBF system stable and to avoid any potential technical problems. The FCC will be monitoring to ensure the EBF system is stable during this reopening period. If they assess that the upload volume is too high, they will send out another notice with directions to reduce the amount of uploads per hour.

ARRL VEC will comply with the FCC directive, limiting our transmissions but sending as many backlogged sessions as possible without overloading their system. The files will be submitted to the FCC in the order in which they were received, starting with the files from Monday, June 12, and moving forward from there. ARRL VEC will begin submitting the backlogged applications as soon as the EBF system becomes available, and assuming all FCC systems remain stable.

In an FCC notice published on June 21, 2023 (<https://www.fcc.gov/document/uls-tcns-e-106-and-asr-available>), the Commission provided a deadline extension for filings in the ULS and the Antenna Structure Registration (ASR) system, explaining, "Because parties could not make

electronic filings or view the contents of the affected systems while they were unavailable, we are extending the deadlines for all regulatory filings that were due in the affected systems between June 9, 2023, and June 29, 2023, until Friday, June 30, 2023. We note that we have provided for a longer extension for these filings than initially contemplated in the June 13 Public Notice in anticipation of high traffic volumes on these systems in the coming days. In that regard, we encourage filers to consider deferring discretionary filings this week, and we encourage filers preparing large submissions to coordinate in advance with [the] staff of the Bureaus.”

THE BIG BANG THEORY ANTENNA LIVES ON

An antenna that holds an important place in scientific history sits on a small parcel of land on Crawford Hill in Holmdel Township, New Jersey.

The antenna is known as the [Holmdel Horn Antenna](#), and it was built in 1959 by Bell Labs (now Nokia Bell Labs) researchers. It was originally designed to bounce radio signals off of reflective satellite balloons for long-distance communication. It worked, and the Holmdel Horn Antenna was no longer needed.

Two Bell Labs astronomer employees, Arno A. Penzias and Robert W. Wilson, received permission in 1965 to use the antenna to search for radio transmissions in outer space. They pointed the antenna toward what was considered a quiet area, but what they discovered was anything but quiet.

They discovered [Cosmic Microwave Background radiation](#), which provided evidence for the [Big Bang Theory](#). [Photo courtesy of Ken Barber, W2DTC]



Now, there is a historical marker at the site, but there has been some dispute as to who owns the antenna and surrounding land. In mid-June 2023, the Holmdel Township Committee voted unanimously to approve resolutions that will begin the process of acquiring two of the three parcels that make up the Crawford Hill property. The township committee is leaving the third parcel to be part of the redevelopment toward preserving Crawford Hill as a public park to celebrate the horn antenna's place in scientific history. Visit the [Holmdel Horn Antenna](#) to learn more.

THE HARBIN INSTITUTE OF TECHNOLOGY (HIT) IN CHINA IS DEVELOPING A NEW LUNAR AMATEUR RADIO SATELLITE.

Lunar OSCAR II is a lunar amateur radio payload being developed by a team that consists of students from HIT and international amateur radio enthusiasts. Its baseline functions include telemetry, digital image downlink from an infrared camera, and a digipeater with JT4G uplink/downlink. It will also provide chances to upload and test new waveforms and algorithms for radio communications and measurements across very long distances. Amateur radio orbit determination experiments, like the Very Long Baseline Interferometry (VLBI), are also possible with these links. HIT has previously successfully developed the first lunar amateur radio satellite, Longjiang-2/DSLWP-B. As a subsequent mission, Lunar OSCAR II will continue offering various resources for communications relay and amateur radio research, and it will help promote amateur radio to communities. The Lunar OSCAR II payload will be onboard a lunar microsatellite with a volume of about 300x200x100 cubic millimeters and a mass of about 14 kilograms. It will utilize downlinks on UHF for telemetry and images by using 250/500 baud GMSK with turbo codes, as well as a digipeater that uses 4.375 baud FSK with convolutional coding (JT4G). More information is available at <https://by2hit.github.io/>. The satellite is planned to launch from Wenchang, China, in 2024. A downlink on 437.750 MHz has been coordinated.

AMATEUR RADIO HELPS AIR SHOW FLY HIGH

More than 40 members of the Nashville Amateur Radio Club, Williamson County ARES®, and Stones River Amateur Radio Club partnered to provide operations support leading up to and throughout the 2023 Great Tennessee Air Show.

On June 10 - 11, 2023, the show was headlined by the US Navy Blue Angels demonstration team. Tom Delker, K1KY, Air Show Communications Coordinator, said that amateur radio operators from the Middle Tennessee Emergency Amateur Radio System have been supporting the air show since the mid-1980s.

Operators were able to employ multiple technologies during the event, including simplex radio operations, RF mesh networking, mobile VoIP phones, IP surveillance cameras, APRS tracking, and weather monitoring and measurement.

Smyrna/Rutherford County Airport Authority Director John Black and Deputy Director Salil Rai expressed their sincere appreciation for the team and all those who worked the event. This volunteer amateur support translates to operations money that can go directly towards community projects.

In addition to the US Navy Blue Angels demonstration team, historic aircraft, including the Spirit of Detroit DC-3 and the Blue Angels' "Fat Albert" C-130 Hercules, also highlighted the show.

Event organizers said they expected more than 50,000 people to attend the event. The next Great Tennessee Air Show is scheduled for 2025.

SOLAR CYCLE 25'S MAXIMUM MIGHT ARRIVE EARLIER AND HIT HARDER

Solar Cycle 25 has been underway since April 2019. Ever since the cycle began, the sun has become more active, unleashing solar flares, coronal mass ejections, and geomagnetic storms, with at least one scientist warning solar maximum could arrive ahead of schedule, and that's not great news for the digital economy here on Earth.

The current solar cycle has a forecasted peak sometime in 2025. In December 2022, the total number of sunspots was at its highest in eight years, indicating solar activity was ramping up. Earlier this year, scientists observed twice as many sunspots -- red flags that solar maximum could be nearing.

Another indication of increased solar activity is the number and intensity of solar flares:

In 2022, there were fivefold more C-class and M-class solar flares than there were in 2021, and year on year, the number of the most powerful, X-class solar flares is also increasing, according to SpaceWeatherLive.com. The first half of 2023 logged more X-class flares than in all of 2022, and at least one has directly hit Earth. (Solar flare classes include A, B, C, M and X, with each class being at least 10 times more powerful than the previous one.) -- [Live Science](#)

Over the years, we've explained solar flares can spark geomagnetic storms and cause disruptions to satellites and even power grids.

What's concerning is a solar physicist at the University of College London, Alex James, told [Live Science](#) that the sun's increase in solar activity is a warning sign the solar maximum could arrive by the end of this year. He said the initial forecast was for 2025. *All this evidence suggests that Solar Cycle 25 is "going to peak earlier, and it's going to peak higher than expected," James said.*

Other solar physicists have told the science publication very similar forecasts. They warned: "We are poorly prepared."

The federal government became increasingly serious about potential grid-down events produced

by solar storms with a 2016 executive order signed by the Obama Administration titled *"Coordinating Efforts to Prepare the Nation for Space Weather Events."* Live Sience

Space Weather also said the sunspots are getting closer to the poles indicating we are near the peak.

SHORTS

W9DXCC REGISTRATION NOW OPEN – Registration for the 2023 W9DXCC Convention, along with the DX and Contest Universities is now open at <https://w9dxcc.com/> The Convention and Banquet take place on Saturday, September 16, 2023 at the Chicago Marriott Naperville, and the DX and Contest Universities take place on Friday, September 15, 2023 at the same place. If you are remotely interested in DXing or contesting, you owe it to yourself to attend the convention, where you can hear presentations from some of the top DXers and contesters in the world. It's also a great opportunity to swap stories and get tips from these same folks. The DX and Contest Universities are where you can learn how to maximize your chances of getting rare DX and improving your contest scores.

Society of Midwest Contesters Lifetime Achievement Award - Congratulations to Jay Krauss W9TC for winning the Society of Midwest Contesters Lifetime Achievement Award. Looking through the list of SMC-LAA winners, I see several familiar callsigns. Sort of a Who's Who of Midwest Contesters. <https://www.w9smc.com/smc-lifetime-achievement-award/>

Jay is the trustee for the Indianapolis Radio Club call, W9JP and the secretary-treasurer for the Hoosier DX and Contest Club (HDXCC) and one of the key members of the Indy United Field Day Effort.

He donated a HyGain 2 meter vertical to the RCA ARC to use at the Ivy Tech remote receiver site several years ago. Edited K9RU

KH8RRC DXpedition to American Samoa July 4-18 2023 - American Samoa is #71 on the Club Log DXCC Most Wanted list. The American Samoa National Park is Parks on the Air K-0053 and has never been activated. If you need KH8 for DXCC, or would like get the first-time POTA activation in your log, or want the IOTA credit, be looking for KH8RRC from July 4-18, 2023. Yuri N3QQ, Hal W8HC and, my guest for this show, James KB2FMH, make up the team of experienced ham radio operators who are KH8RRC. In this interview with James, he talks about the logistics involved with this DXpedition, their operating plans and he offers tips on how to best get KH8RRC in your log.

The Radio Society of Great Britain (RSGB) has received a generous donation of His late Majesty, King Hussein of Jordan's UK amateur radio equipment. Her Majesty Queen Noor of Jordan chose to donate the UK amateur radio equipment to the Society. King Hussein, JY1 (SK), who died in 1999, was a prolific radio amateur who made contacts with many hams from around the world. He was known for operating modestly, never announcing himself as King Hussein, but opting to go by 'Hussein from Jordan' instead. A permanent display is being organized at the RSGB National Radio Centre at Bletchley Park.

INTERESTING ARTICLE ABOUT HAM RADIO Thanks to a heads up from Mark Burke, W9MGB, who sent in a link to an article about ham radio emergency preparedness. In this article, from the Guardian, Glenn Morrison, WB6RLC, talks about preparing for emergency communications in Palm Springs, CA. For the full article, go to <https://www.theguardian.com/us-news/2023/may/27/ham-radio-emergency-natural-disaster-climate-crisis>

ARRL Audio News **ARRL Audio News** is a summary of the week's top news stories in the world of amateur radio and ARRL. Available every Friday. <http://www.arrl.org/arrl-audio-news>

ARRL On The Air Podcast discusses topics covered in the current issue of On The Air. <http://www.arrl.org/on-the-air-podcast>

THANKS FOR READING

THE RCA ARC MONTHLY NEWSLETTER IS COMPILED AND EDITED BY JIM RINEHART, K9RU AND JIM KEETH, AF9A. ALL MATERIAL CONTAINED HEREIN IS OBTAINED FROM THE SOURCES CREDITED AND EDITED FOR THIS NEWSLETTER.
